



ATTORNEY DOCKET NO.: GRA26 006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Patent Application of Joseph Kennedy, Jr., et al.

Serial No.: 10/531,044

Art Unit: Unassigned

Filed: April 12, 2005

Examiner: Unassigned

Title: SYSTEM AND METHOD FOR ENHANCING THE ACCURACY OF A LOCATION ESTIMATE

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The below listed documents are identified for consideration in the examination of the subject application.

U.S. PATENTS AND PATENT APPLICATION PUBLICATIONS:

Pat/Pub. No.	Patentee(s)	Issue/Pub. Date	Examiner Initials
6,922,170	Alexander, Jr.	July 26, 2005	/DP/
6,845,240	Carlson, et al.	January 18, 2005	
6,839,539	Durrant, et al.	January 4, 2005	
6,834,234	Scherzinger, et. al.	December 21, 2004	
6,782,264	Anderson, et al.	August 24, 2004	
6,553,322	Ignagni	April 22, 2003	
6,501,955	Durrant, et al.	December 31, 2002	
6,477,161	Hudson, et al.	November 5, 2002	/DP/

6,470,195	Yer	October 22, 2002	/DP/
6,334,059	Stilp, et al.	December 25, 2001	
6,311,043	Haardt, et al.	October 30, 2001	
6,295,455	Fischer, et al.	September 25, 2001	
6,212,319	Salah, et al.	April 3, 2001	
6,188,351	Bloebaum	February 13, 2001	
6,144,711	Raleigh, et al.	November 7, 2000	
5,870,029	Otto, et al.	February 9, 1999	
5,506,863	Meidan	April 9, 1996	
5,465,289	Kennedy, Jr., et al.	November 7, 1995	
5,317,323	Kennedy, Jr., et al.	May 31, 1994	
4,783,744	Yueh	November 8, 1988	
US20040043775	Kennedy, Jr., et al.	March 4, 2004	
US20020094821	Kennedy, Jr.	July 18, 2002	
US2003190919	Niemenmaa	October 9, 2003	/DP/

The below listed documents are enclosed for consideration in the examination of the subject application.

FOREIGN PATENTS AND PUBLICATIONS:

<u>Patent No.</u>	<u>Patentee(s)</u>	<u>Issue Date</u>	<u>Examiner Initials</u>
JP60-347529	NEC Corp.	December 22, 1994	DP

Relevance of Foreign Language Documents

1. JP60-347529

An English translation of the listed document has been provided. DP

OTHER PUBLICATIONS:

DP Leshem, et al., "Array Calibration in the Presence of Multipath," IEEE Transactions of Signal Processing, Vol. 48, No. 1, pp.53-59, January 1, 2000.

DP Ziskind, I., Wax, M., "Maximum likelihood localization of multiple sources by alternating projection", IEEE Trans. Acoust., Speech, Signal Process. vol. 36, no. 2 (Oct. 1988), 1553-1560;

DP Van Der Veen, M, Papadias, C.B., Paulraj, A.J., "Joint angle and delay estimation" IEEE Communications Letters vol. 1-1 (Jan. 1997), 12-14;

DP Schmidt, R.O. "Multiple emitter location and signal parameter estimation" Proc. RADC Spectrum Estimation Workshop, (Mar. 1999), 243-258;

DP Young-Fang Chen, Michael D. Zoltowski "Joint Angle and Delay estimation of DS-CDMA communication systems with Application to Reduced Dimension Space-time 2D Rake Receivers", IEEE Transactions on Signal Processing, (1999);

DP Paulraj, A.J., Papadias, C.B., "Space-Time Signal Processing for Wireless Communications", IEEE Signal Processing Magazine, vol. 11 (Nov. 1997), 49-83;

DP Paulraj, A.J., Papadias, C.B., "Space-Time Signal Processing for Wireless Communications: A Survey" Information System Laboratory, Stanford University (Apr. 16-18, 1997);

Haardt, Brunner and Lassek "Joint Estimation of 2-D Arrival Angles, Propagation Delays, and Doppler Frequencies in Wireless Communications, Proc. IEEE Digital Signal Processing Workshop, volume 1, pages 1-4, Bryce Canyon National Park, Utah, Aug 1998.

M.Wax, "Position location from sensors with position uncertainty", IEEE Trans. Aero., Elect. Syst. AES-19, no. 2 (Sept. 1983), 658-662;

D.J. Torrieri. "Statistical Theory of Passive Location Systems", IEEE Trans. Aerosp. Electron. Syst. AES-20, no. 2 (Mar. 1984), 183-198;

Y.T. Chan and K.C. Ho, "A simple and efficient estimator for hyperbolic location", IEEE Trans. Signal Proc. 42, no. 8 (Aug. 1994), 1905-1915;

W.H. Foy. "Position location solutions by Taylor series estimation", IEEE trans Aerosp. Electron. System AES-12, no. 2 (Mar. 1976), 187-194;

R.G. Stansfield, "Statistical theory of DF fixing", Journ. IEE 94, part IIIa (Oct. 1947), 762-770

M.P. Wylie and J. Houtzman, "The non-line of sight problem in mobile location estimation", Proc. IEEE 5th International Conf. on Universal Personal Communications, vol. 2 (Oct. 1996), 827-831;

L.Cong and W.Xuang, "Non-Line-of-Sight Error Mitigation in TDOA mobile location" Proc. IEEE Global Telecommunications conference vol.1 (2001), 680-684;

P.C. Chen, "A non-line-of-sight error mitigation algorithm in location estimating" Proc. IEEE Conf. on wireless Communications Networking, vol. 1 (1999), 316-320;

N.J. Thomas, D.G.M. Cruickshank and D.I.Laurenson, "Performance of a TDOA-AOA hybrid mobile location system" 3G Mobile Communication Technologies Conf. Proc. 1 (Mar. 2001), 216-220

Caffery, J., Jr., et al., "Subscriber Location in CDMA Cellular Networks," IEEE Transactions on Vehicular Technology, Vol. 47, No. 2, May 1998.

Caffery, J., Jr., "A New Approach to the Geometry of TOA Location," IEEE, VTC 2000, pp. 1943-1949.

D.W.
2/6/08